Amendments to the Specification:

Please replace the paragraph beginning on page 5, line 20 of page 6 with the following rewritten paragraph:

The application of the magnetic field provides for an adjacent arrangement of the ion exchange resin particles of the magnetic fraction so as to form thin chains in the direction of the magnetic field lines whereas the non-magnetic second fraction assumes positions around these chains. Furthermore, as a result of the magnetic properties, the contacts between adjacent particles which is needed for the transport of the charges from particle to particle in a chain is ensured over the full length of the chain. Generally, the chains bridge the compartment spaces between two adjacent membranes. In addition, the individual chains of the magnetic fraction repulse one another. As a result, the chains are uniformly distributed over the compartment and extend parallel with the largest possible distance between the chains. If the mutual distance, which the chains can assume is limited by the container walls, in an ideal case, a geometric three-dimensional arrangement is formed which is ~~compared~~ composed of parallel chains of the magnetic ion exchanger fraction.

Please replace the paragraph beginning on page 8, line 13 with the following rewritten paragraph:

Furthermore, Fig. 1a shows the possible paths for the negatively charged anions, in the example Cl^-, through the anion exchanger membranes and for the positively charged cations, in the example Na^+, through the cation-exchanger membranes by

arrows 11, particularly with a DC voltage differential effective on the cathode 4 and the anode 5. Following these arrow directions, the cations and the anions are enriched in every second compartment, that is, the concentrate compartments 17 ~~(KK)~~, whereas the aqueous solution in the remaining half of the compartments, the demineralization compartments 18 ~~(DK)~~ is demineralized. In accordance therewith, the discharge means for the demineralized aqueous solution 6 are in communication with the ~~DKs~~ demineralization compartments 18 and the discharge means for the ion-enriched part of the aqueous solution 7 are in communication with the ~~KKs~~ concentrate compartments 17. The different discharge means 6 and 7 may of course be combined in a collective discharge means for the demineralized solution and, respectively, a collective discharge means for the ion-enriched aqueous solution.

Please replace the paragraph beginning on page 9, line 1 with the following rewritten paragraph:

Fig. 2, in contrast, shows an EDI device with a self-aligning magnetically hard and a non-magnetic ion exchanger resin particle fraction 12 and, respectively 13 in the compartments ~~10~~ 17, 18. It is not important whether the cation or anion exchanger resin particle fractions have the magnetic properties by admixture of additives. It is only important that all the particles of one of the fractions are magnetic whereas the particles of the other fraction are non-magnetic. The distribution of the particle fractions is shown in Fig. 2 in an idealized manner. For the proper orientation or alignment of the ~~hard-magnetic~~ permanent-magnetic ion exchanger resin particles, ~~that~~ the stack with all the components must be exposed to a magnetic field so that the magnetic particles align themselves in chains which extend parallel to the magnetic field lines. Consequently, the magnetic field lines should extend

preferably normal to the membranes 1 and 2. Upon alignment and the formation of chains by the hard-magnetic particles in the mixed bed, the magnetic field is no longer needed because of the permanent magnetic properties of the hard-magnetic particle fraction.

Please replace the paragraph beginning on page 9, line 20 with the following rewritten paragraph:

Figs. 3 and 4 show a MEDI device consisting of an EDI device, which includes an integral structure for generating a magnetic field whose magnetic field lines extend through the whole stack of the EDI device preferably in a direction normal to the membranes 1 and 2. The arrangement may comprise at least a permanent magnet 15 (see Fig. 3) at least one electromagnet 16 (see Fig. 4) or at least one superconductive magnet for the generation of the magnetic field. In that case, a mixed bed is used which, in accordance with the design arrangement as described above in connection with Fig. 2, comprises cation and anion-exchanger resin particle fractions of which all the particles of one of the fractions have magnetic properties. In contrast to the arrangement as shown in Fig. 2 however this magnetic particle fraction 14 does not need to have permanent, that is, hard-magnetic properties. If a magnetic field is applied to the stack, also particles with soft-magnetic properties, that is particles which ~~became~~ become magnetic when subjected to a magnetic field, are suitable. With these particles, the magnetic alignment occurs only upon establishment of the magnetic field.

Please insert at the end of the description after the paragraph listing literature on page 10:

[2] US 5,154,809